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CONCERNING LYGÆIDÆ.—NO. 2.

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ROSELLE PARK, N. J.

Kolenetrus new genus.



Shining. Punctures set with fine incumbent hairs. Head lightly transverse; across eyes, which almost touch margin of pronotum, wider than anterior margin of pronotum, subequal to anterior rounded submargin; coarsely and closely punctate. Antennæ very shortly pilose; first segment rather short, extended but little beyond apex of tylus; second and third segments subequal. Pronotum a little longer than wide, strongly constricted transversely just behind middle, lateral margins gradually rounded back of eyes, the edge of this margin obtuse, terete; both lobes closely punctate, the central disk of anterior lobe more sparsely so; anterior margin straight, without an impressed collar; posterior margin lightly concave; humeral area nodosely elevated. Scutellum much longer than wide, posteriorly obtusely carinate, punctate elsewhere. Clavus with three regular rows of punctures. Corium rather closely punctate without the median vein; costal margin anteriorly lightly concave. Membrane never entirely absent. Pleuræ coarsely punctate. Posterior margin of metasternum concave. Incrassate fore femur dissimilar in the two sexes, male armed with a single stout post-median tooth, female with two smaller teeth. Fore tibia straight. Hind tibia almost nude, shortly pilose apically. Posterior tarsus with basal joint only a trifle

longer than second and third together. Venter finely and closely punctate, with a coating of fine incumbent hairs.

Type—*Rhyparochromus plenus* Distant, Biol. Cent. Amer., p. 216, pl. XIX, fig. 23, 1882. Central America, Ariz., N. Y. (U. S. N. M.), Mass., Mt. Washington (Mrs. Slosson's coll.), Georgetown, Conn. (A. M. N. H.), Huachuca Mts., Ariz. (my coll.).

Because of the character of the lateral margins of the pronotum this genus should be referred to the tribe Myodochini, closely related to *Ptochiomera* Say. It has no affiliation whatever with the other species listed by American authors in the genus *Rhyparochromus*; in fact this genus does not appear to occur within the United States.

Valonetus new genus.

Body, antennæ and legs strongly pilose, not shining. Head lightly exserted, a little wider than long, the width across eyes subequal to anterior submargin of pronotum. Basal segment of antenna shorter than basal segment of rostrum, well extended beyond apex of tylus. Bucculæ lightly elevated, running to base of head, first segment of rostrum reaching base of head. Pronotum without any evidence of a collar anteriorly, obtusely constricted just behind the middle; lateral margins obtuse, terete; anterior lobe finely and obscurely punctate, posterior lobe wider and more coarsely and sparsely punctate. Scutellum equilateral. Clavus deflected to corium, with three regular rows of punctures. Costal margin of corium convexly arcuated. Anterior incrassate femur provided with three or four subapical teeth and pilose throughout. Posterior tibia with short pilosity. Posterior tarsus with basal segment longer than second and third together.

Because of the character of the pronotal margins, position of the ventral opaque spots of the fourth abdominal segment and the absence of a collar this genus must be placed close to *Ptochiomera* in the tribe Myodochini.

Valonetus pilosus new species.

Color ranging from ferrugineous to pale castaneous; posterior margin of pronotum, costal margin of corium, acetabulæ, legs, antennæ and rostrum ochraceous. Head triangular; eyes strongly protruding; preocular sides of head to base of antennæ very short, scarcely longer than the postocular space. Antenna with first segment extended beyond apex of tylus by nearly one-half its length, this segment subequal to third, which in turn is slightly shorter

than second, fourth segment pale castaneous, subequal to second. Posterior lobe of pronotum sometimes a little paler, more coarsely and sparsely punctate than anterior lobe. Scutellum sparsely punctate and apically carinate. Clavus with three regular rows of punctures. Commissure about one-half the length of the scutellum. Corium unicolorous, sparsely punctate, costal margin very lightly expanded and convexly rounded. Membrane decolorous, reaching apex of abdomen. Length 3 mm.

Type—♂ ? U. S. N. M. labelled Tex.; Paratypes—2 specimens from Texas and one labelled Lavaca Co., Tex (U. S. N. M.). The genital segment is so firmly glued to the point that it is impossible to determine the sex of the type. This species resembles a very small pale *Perigenes*.

Genus *Esuris* Stål.

Stål placed this genus, based upon his *E. tergina* from Brazil, in the tribe Lethæaria. I have carefully examined numerous specimens of my *E. castanea* from Arizona and two specimens of the new species described below and can find but two widely separated glandular opaque spots on the side of the fourth ventral segment, placed in reference to each other exactly as they are in the other genera of the Myodochini. I would therefore transfer this genus not only because of the position of the opaque spots but furthermore because the obtuse, terete character of the lateral margins of the pronotum would serve to place this genus among its natural relatives close to *Ptochiomera* in the tribe Myodochini. Furthermore in diagnosing the characters of this genus Stål depended upon the brachypterous character of the hemelytra and the fact that the clavus was connate with the corium. These characters will not serve except for differentiating the brachypterous forms as I have recently discovered in my collection two macropterous females of *E. castanea* in which the clavus is distinct from the corium and the membrane fully developed. I have recently seen a specimen of *E. castanea* Barb. from Ft. Collins, Colorado, in the collection of Dr. E. D. Ball.

Esuris fulgidus new species.

Dark brown or piceous, very shining; second and third segments of antennæ, rostrum, apices of femur, tibia and tarsus ochraceous. Head triangular, a little wider than long, across eyes as wide as across anterior submargin of pronotum, finely punctate. Antennæ finely pilose, basal segment piceous, short, scarcely exceeding tylus, shorter than basal segment of rostrum,

second segment one-third longer than third, fourth segment pale castaneous, nearly as long as second. Rostrum with basal segment reaching base of head, second segment considerably longer, a little longer than third segment. Pronotum a little longer than wide, parallel sided, very lightly constricted near posterior margin, disk of anterior lobe impunctate, posterior margin straight. Scutellum wider than long, very finely punctate and not carinate. Clavus connate with the corium, level with it and with four rows of punctures paralleling the scutellum. Corium finely and sparsely punctate, its oblique, truncated apical margin reaching to the fourth abdominal incisure. Membrane entirely wanting. Beneath concolorous with dorsal parts. The incrassate fore femur with two or three minute median teeth. Anterior tibia lightly curved. Length ♀ 2 mm.

Described from ♀ Catal. Sprgs., Ariz., July 4, E. A. Schwarz (Type U. S. N. M.), and ♀ Salton, Calif., H. G. Hubbard Collector (Paratype—U. S. N. M.).

***Ozophora ampliatus* new species.**

Very closely related to *Ozophora unicolor* Uhl. Pale castaneous; lateral expanded margins of corium stramineous; lateral margins of pronotum, antennæ except apex of second and third and all of the terminal segment, rostrum and legs, ochraceous.

Head impunctate; diameter of vertex between eyes about three times as wide as eye itself; ocelli placed closer to the eyes than to the middle point of vertex; viewed from the side, the eyes only slightly higher than wide, not conspicuously emarginate behind. Preocular sides of head to tip of antenniferous tubercles about one half the length of eye, longer than post-ocular space, not contracted back of eyes. Bucculae meeting on an imaginary line drawn across just back of the anterior margin of eyes. Antennæ nude, apices of second and third and all of terminal segment embrowned, not pale ringed; second segment very long, almost twice as long as basal, third one-third shorter, fourth a little shorter than third. Rostrum reaching the intermediate coxæ, basal segment reaching base of head, subequal to basal segment of antenna, a little shorter than second, the latter one-third longer than third segment. Pronotum broad, similar to *O. unicolor*, with a series of punctures behind the depressed anterior margin and within the widely reflexed paler lateral margins; posterior lobe rather closely punctate more depressed than the anterior lobe, the disk of which is impunctate; posterior lobe sometimes slightly paler. Scutellum with the central disk punctate and depressed, posterior to which obtusely carinate; apex not conspicuously paler. Clavus wide, provided with numerous punctures not arranged in regular rows. Pale costal margin of corium rather widely expanded and reflexed, its edge not concavely arcuated. Membrane uniformly embrowned. Legs pale; apical half of anterior femur armed with four equidistant, sharp spines. Hind tibia provided with rigid bristles. Posterior tarsus with basal segment twice as long as second and third together. Length 8.5 mm. Width of pronotum 3 mm.

Type—♂ "Arizona" (Coll. U. S. N. M.); Paratypes—one specimen in collection Acad. Nat. Sci. Philadelphia and one ♀ (my coll.) both collected by Dr. Henry Skinner in Carr Canyon, Huachuca Mts., Arizona.

This species is generally paler than *O. unicolor* Uhler with the terminal segment of the antenna not pale ringed at base. In Uhler's species the width of the vertex of head is not more than twice that of eye, the ocelli are placed almost midway between eyes and central point of vertex, the eye viewed from the side is almost twice as high as wide and plainly emarginate behind, and the head more strongly contracted behind the eyes.

Apparently Mr. Distant was unfamiliar with the genus *Ozophora* as he made no mention of it in the *Biologia Centrali-Americana* and erected two genera synonymous to it. Uhler properly placed Distant's *Davila* as a synonym of *Ozophora* and it appears probable, judging from the characters and illustration, that *Ba'boa* will also have to be referred to the above genus.

Stygnocoris rusticus Fall. and *pedestris* Fall.

The former of these two species has been recorded from North America by Horvath, 1908, and from Quebec by Van Duzee in his recent Catalogue. In the collection of the U. S. N. M. is a specimen from St. Johns, Quebec, and recently I have received a specimen from Prof. H. M. Parshley taken at Truro, Nova Scotia. This species has not yet been found within the United States but it should occur in the mountainous parts of New England and New York.

Still another European species, *S. pedestris* Fall., which has not hitherto been reported from this continent must be added to our fauna. I am indebted to Prof. Parshley for a specimen of this species from Truro, N. S., and to Mr. Wm. T. Davis for one from Cape Breton, N. S. Unlike the former species this has been found to occur in the fauna of the United States as Prof. Carl J. Drake has taken three specimens of it at Cranberry Lake, Adirondack Mts., N. Y., Aug., 1917, and four specimens at Elka Park, Catskill Mts., N. Y., Aug., 1917. This is a smaller paler brown, subshining species, with the pronotum less closely punctate and quite pilose; the lateral margins of this part are lightly carinate. The legs are testaceous.

Acompus rufipes Wolff.

This is another palaearctic species which must be added to our list of North American species as in the U. S. N. M.; from the collection of P. R. Uhler are two specimens, one labelled "Victoria" [Vancouver Is.] and the other "N. R. R." which probably refers to Northern Pacific or Canadian Pacific of Brit. Col. This species is likely to be confused with *Stygnocoris pedestris*, which it resembles in general appearance. The eyes are however more protruding, the lateral edge of the pronotum is more evidently carinate or lightly expanded and the whole surface of both lobes of this part and the head closely punctate and not at all pilose.

Genus **Rhyparochromus** Curt.

This genus as diagnosed by various European authors and typified by *R. chiragra* Fab. does not appear to occur upon this continent. Yet owing to the diverse interpretation put upon the diagnostic characters of Curtis, this genus has been a sort of dumping ground for numerous species of American hemiptera at one time or another. It becomes necessary then to break up this assemblage of species which has been placed under this genus and assign them to their true affinities. *Rhyparochromus soldalicus* Uhl. (not *soldalicus*, Van Duzee) and *angustatus* Van D. will have to be transferred to the Tribe Beosini and affiliated with *Trapezonotus rufipes* Stål to form a new genus. This gives an assemblage of species falling in a natural group closely related to but structurally distinct from the true *Trapezonotus* which must be retained to include such forms as *T. arenarius* Linn. and *caliginosus* Dist. For this new genus I have adopted the name *Malezonotus* of which *Malezonotus (Trapezonotus) rufipes* Stål must be the type.

Malezonotus new genus.

Not pilose. Head transverse, across eyes as wide as anterior margin of pronotum; antenniferous tubercles, seen from the side, strongly oblique. First segment of antenna short, stout, barely exceeding tylus. First segment of rostrum reaching base of head, second segment distinctly longer than third. Pronotum transverse, dull black, unicolorous except most often the lateral explanate margins and sometimes the posterior margin, scarcely or very indistinctly

separated into two lobes, the anterior one impunctate and the posterior one either impunctate or very finely and obsoletely so; lateral margins evenly expanded throughout, most commonly pale and always impunctate, subparallel or very gently converging anteriorly, very lightly or not at all sinuate behind the middle; anterior margin nearly straight; posterior margin strongly sinuate before the scutellum, this margin sometimes more or less pale. Scutellum black, unicolorous, flat, longer than wide, not at all or very finely punctate. Corium pale, more or less suffused with fuscous and finely punctate. Clavus with three irregular rows of punctures. Costal margins expanded, subparallel to each other or very gently rounded. Fore femur incrassate, armed with two or three teeth between middle and apex, one of which is frequently larger. Fore tibia nearly straight in both sexes. Hind tibia with short rigid bristles. Posterior tarsus with basal segment very much longer than second and third together but not twice as long.

Type *Trapezonotus rufipes* Stål. Here also should be placed *Rhyparochromus soldalicus* Uhl. and *R. angustatus* Van D. and a new species from Lakehurst, N. J., described below.

From *Rhyparochromus* Curtis (type *chiragra* Fab.) this genus differs as follows: not pilose, pronotum transverse, lateral margins more nearly parallel and the edge more evenly expanded, both lobes either impunctate or the posterior one must delicately punctate, fore femur not so incrassate and without the very prominent single tooth, rostrum with second segment longer than third, fore tibia nearly straight, posterior tarsus with basal segment not twice as long as second and third segments together.

From *Trapezonotus* Fieb. (type *agrestis* Fall. = *arenarius* Linn.) this genus differs as follows: both lobes of the pronotum concolorous, at most with only the posterior margin pale, lateral margins more nearly parallel, posterior lobe not so coarsely punctate, the fore femora are differently armed, and the anterior tibia more nearly straight.

I have examined twelve specimens of Uhler's *R. soldalicus* from Oregon, Nevada and California. I have recently received a single specimen taken near the Agricultural College Station, Miss., and two others collected by W. L. McAtee at Dyke, Va., which, except for the more infuscated antennæ, I cannot differentiate from Uhler's species.

Prof. John B. Smith in his List of Insects of New Jersey included on my authority *T. rufipes* from Lakehurst, N. J. But after a careful comparison of these Lakehurst specimens with authentic specimens of *rufipes* from Texas in the U. S. N. M., I am convinced that these will have to be placed as a new species.

***Malezonotus fuscus* new species.**

Head, pronotum, scutellum and beneath dull black; apex of third segment and all of fourth segment of antennæ, all of hemielytra except outer anterior margins and membrane, piceous; remainder of antenna, rostrum, acetabulæ and legs rufo-testaceous. Head, as usual, transverse, embedded to the eyes, a little narrower across the eyes than across anterior submargin of the pronotum, finely punctate in front. Antennæ finely pilose, basal segment short, exceeding tylus by one-third its length, about one-third the length of second segment, which is one-third longer than third segment, fourth segment one-fourth longer than second segment. Pronotum, as usual, transverse, with a sparse covering of whitish incumbent hairs; lateral margins pale, not sinuate, subparallel to a short distance behind eyes, where they are suddenly rounded; anterior lobe impunctate, posterior lobe very finely punctate and transversely lightly furrowed just before posterior margin, this margin strongly concave and concolorous. Scutellum closely and finely punctate. Clavus piceous with three somewhat confused rows of punctures. Corium finely punctate, costal edge expanded for the anterior two-thirds, this and area within to subcostal nerve, pale. Membrane abbreviated in brachypterous forms, reaching apex of fifth abdominal segment, entirely piceous. Fore femur provided with a single short post-median tooth, sometimes preceded by a minute tooth. Hind tibia armed with short bristles. Venter very finely punctate. In macropterous individuals the membrane attains apex of abdomen. Length ♂ 3.5 mm.

Described from eleven ♂'s and five ♀'s (all brachypterous) from Lakehurst, N. J., April 2, 1916, collected by sifting the leaves under huckleberry bushes and a single macropterous (Paratype) Smith's Pt., Fire Island Beach, N. Y., VII, 19, 1915, in washup (Coll. of J. R. de la Torre-Bueno). Type ♂ in my collection.

This species is closely related to *M. rufipes* Stål. Besides being generally smaller it differs in that the pronotum is posteriorly transversely wrinkled or furrowed, the hemielytra except outwardly and the membrane entirely infuscated or piceous. *M. angustatus* Van D. differs from the other species of the genus in having the head less transverse, the lateral narrowly expanded edge of pronotum not pale and the hemielytra differently colored. This species is usually brachypterous. I have only seen a single macropterous male labeled

"Cal." in the collection of the U. S. N. M. One of the ms. names of Uhler for *soldaticus* was *oculatus* as a specimen of that species from Ormsby Co., Nevada (collection of C. F. Baker), bears a label to that effect.

***Trapezonotus derivatus* new species.**

Very closely related to and similarly colored as *Trapezonotus caliginosus* Dist. but uniformly larger and the shape relatively more elongated. The head is less transverse; antennæ more pilose, pronotum relatively longer; disk of anterior lobe finely and sparsely punctate with the sides not profusely punctate; lateral margins of pronotum a little more widely expanded; these margins anteriorly straighter and converging more gradually, not being so abruptly rounded back of eyes, the diameter of the submargin just back of eyes only a little wider than head across eyes. This species will average 6-6.5 mm.

Described from four ♂'s and thirteen ♀'s. (Type ♀ my collection.) Huachuca Mts., Ariz.—collected among dead leaves and one ♀ from Ft. Grant, Ariz.—H. G. Hubbard collector, in the U. S. N. M. Both of the above species are closely related to the European *T. ullrichi* Fieb. *T. caliginosus* Dist. also occurs in the Huachuca Mts., Ariz., where I took seven specimens in similar situations to the above species. As indicated by Distant it varies considerably in coloration of legs and antennæ as does *T. derivatus*.

***Trapezonotus diversus* new species.**

Head, anterior lobe of pronotum, scutellum and beneath, black; narrow anterior and lateral margins and posterior lobe of the pronotum, hemelytra anteriorly, narrow anterior margin of pronotum, posterior angle of metasternum and acetabulæ, ochraceous; antennæ with three basal segments, rostrum and legs, ferrugineous; apex of second and third segments and all of fourth segment of antenna, sub-apex of posterior femur, piceous. Apical part of corium and membrane embrowned.

Head transverse, across eyes as wide as anterior sub-margin of pronotum just back of eyes, finely punctate and provided with a rather dense coating of incumbent whitish hairs; antenniferous tubercles visible from above. Antenna rather slender, finely pilose; basal segment short, exceeding apex of tylus by about one-third its length, second segment one-third longer than third, fourth segment about one-fourth shorter than second. Rostrum reaching between middle coxæ, second segment a little longer than third. Pronotum provided with a fine coating of incumbent tawny hairs; lateral expanded pale margins straight, gradually converging anteriorly, gently rounded back of eyes; posterior lobe profusely punctate with fuscous; posterior margin strongly

sinuate. Scutellum elongate, finely and sparsely punctate, with incumbent tawny hairs. Clavus with three irregular rows of punctures, middle row abbreviated. Corium rather closely punctate with fuscous and clothed with incumbent tawny hairs; costal margins anteriorly pale and impunctate; outer lateral margins gently rounded. Membrane unicolorous, extended about to apex of abdomen in macropterous form. Incrassate fore femur, along the outer three-fourths, armed with five or six short teeth tipped with setae, between which are several most minute teeth or serrations. Anterior tibia strongly curved and expanded apically, there armed with a short tooth inwardly. Posterior tibia with two rows of short setose bristles. Posterior tarsus with basal segment only a trifle longer than second and third segments together. Venter finely and closely punctate and clothed with incumbent whitish hairs. Length ♂ 4 mm.

Type ♂, Los Angeles Co., California, from the Coquillett collection in the U. S. N. M.

This is a small species rather closely related to *T. arenarius* Linn., from which it differs in being more narrow, in its clothing of fine incumbent hairs, more slender antennae, with relatively shorter apical segment, punctate head and relatively shorter basal segment of the posterior tarsus. *T. arenarius* introduced from Europe is confined to the mountainous parts of N. E. United States and Canada. The following records for this species may be of interest: Hampton, N. H. (collection of Nathan Banks), Casco Bay, Me., and Claremont, N. H. (collected by G. P. Engelhardt), Top of Whiteface Mt., Adirondack Mts., N. Y. (collected by Wm. T. Davis). The antennae and legs vary in coloration as in the other species from ferrugineous to piceous.

***Sphragisticus simulatus* new species.**

Head, anterior lobe of pronotum, scutellum, fourth segment and sometimes apex of second and third segments of antenna and beneath black; lateral margins and posterior lobe of pronotum, hemielytra, acetabulae and narrow posterior margin of metasternum, ochraceous; first three segments of antenna, rostrum and legs, ferrugineous; posterior lobe of pronotum and hemielytra profusely punctate with fuscous.

Head transverse, across eyes a little narrower than anterior margin of pronotum, impunctate at base, finely punctate in front. Antennae setose; basal segment short, little exceeding the apex of tylus, second segment one-third longer than third, fourth segment a trifle longer than second. Pronotum, with disk of black anterior lobe impunctate, finely punctate in front; pale posterior lobe punctate with fuscous; lateral expanded pale margins provided with a single row of punctures fitted with setose hairs some twelve in number,

these margins almost straight and slightly converging anteriorly to just behind the eyes where they are abruptly rounded; anterior margin almost straight; posterior margin strongly arcuated before scutellum. Scutellum elongate, unicolorous, black, not bivittate with pale, finely punctate on the disk in front and along the margins. Clavus with about four rows of fuscous punctures, the inner rows somewhat abbreviated and confused. The corium rather profusely punctate with fuscous; the costal margin very narrowly expanded and anteriorly impunctate. Membrane embrowned. Rostrum with basal segment reaching base of head, second segment one-third longer than third. Incrasate fore femur armed with several irregular teeth along the outer two-thirds; all of femur sometimes more or less piceous. Anterior tibia gently curved. Hind tibia provided inwardly and outwardly with a row of short oblique bristles and with a row of longer setæ. Hind tarsus with basal segment a little longer than second and third together. Length 4 mm.

Described from three examples ♂ Las Vegas Hot Springs, N. M. (type), ♂ Taos Valley, N. M., and ♀ labelled N. Mex. (Coolidge), all from the collection of the U. S. N. M.

This species is smaller than *S. nebulosus* Fall. the only other member of the genus in our fauna. The scutellum is not, as in *nebulosus*, bivittate with pale, the lateral margins of the pronotum less widely expanded and provided with a greater number of setigerous punctures, the hind tibia have a number of long setæ besides the rigid bristles.

Cligenes delineata Dist.

No member of this genus has hitherto been reported from the United States. However, in the collection of the U. S. N. M. are four specimens of the above species from Los Angeles and one from Palm Springs, California, and another labelled Texas, Belfrage. One of these bears on the label the ms. name *Beosus* (?) *modestus* Uhler. Distant placed this species in the genus *Salacia* Stål, but as shown by Bergroth (Ann. Soc. Entomol. Belg., 153, 1913) this name is pre-occupied and must give way to *Cligenes* Dist. In this same paper the author gives the synonymy of the closely related genus—*Antilocoris* Kirk.

These two genera containing our smallest Lygæids are readily separated by the fact that *Cligenes* is commonly somewhat shining, not at all or very sparsely pilose; the two lobes of the pronotum plainly separated by an obtuse transverse constriction, the anterior lobe being impunctate; the anterior femur more obviously incras-

sate and armed with fine teeth; the first segment of the antenna is longer than the basal segment of the rostrum. Both genera belong to the Rhyparochromini.

***Peritrechus saskatchewanensis* new species.**

Head, anterior lobe of pronotum, scutellum and beneath, dull black; antennæ, basal segment of rostrum, legs except apices of femora, middle portion of tibia and basal segment of tarsus, piceous; narrow anterior and lateral margins and posterior lobe of pronotum, two spots on scutellum, hemielytra, narrow anterior and posterior margins of prosternum, posterior margin of metasternum and acetabulæ, ochraceous; second and third segments of rostrum, knees of femora, middle part of tibiæ and basal segment of tarsi testaceous.

Head transverse, across eyes as wide as anterior margin of pronotum. Antennæ finely pilose, first segment short, barely exceeding apex of tylus, second segment one-third longer than third, fourth segment almost equal to second. Rostrum with basal segment reaching base of head, second segment only slightly longer than third. Pronotum very transverse, almost twice as wide as long, black impunctate anterior lobe about equal to the length of pale posterior lobe, the latter punctate with fuscous; anterior margin very lightly arcuate, almost straight; lateral edge carinate, these margins almost straight and converging gradually, abruptly rounded back of eyes. Scutellum longer than wide, fasciate with ochraceous on either side, behind middle, finely and sparsely punctate on the disk, coarsely punctate on either side of the apical portion. Clavus with four irregular series of fuscous punctures, the two inner series confused and abbreviated. Corium except for central discal spot and costal margin anteriorly rather closely and evenly punctate on a pale ochraceous background. Membrane reaching apex of abdomen, pale, mottled with fuscous towards base. Fore femur with a short median tooth, another larger one midway between this and apex, followed by two or three smaller teeth towards apex. Anterior tibia gently curved. Posterior tibia with two rows of short setose bristles, especially towards apex. Posterior tarsus with basal segment almost equal to second and third together. Venter very finely and closely punctate and clothed with fine incumbent hairs. Length ♀ 5 mm.

Type ♀ Oxbow, Saskatchewan (coll. by F. Knab). Paratype ♀ Los Angeles Co., Cal. (coll. by Coquillett), both in the collection of the U. S. N. M.

In the paratype the second and third segments of the antennæ are only black at apex. This species differs from the three other described species in being broader in proportion to length. Further differences are found in the more widely carinate lateral margins of the pronotum which are pale, the edge not at all sinuate; the prono-

tum is more transverse, the anterior submargin being wider in diameter than the width of head across eyes; first segment of antenna shorter, barely exceeding tylus and less than half the length of basal segment of rostrum.

Aphanus umbrosus and illuminatus Dist.

Dr. Horvath was undoubtedly correct in suggesting (Ann. Mus. Nat. Hungar., 561-562, 1908) that Distant's pale legged var. *illuminatus* was a distinct species from his more common widely distributed, all black form—*umbrosus*. While the latter species is pretty generally distributed over the entire United States except possibly the extreme northern areas, the former seems to be confined to the extreme southern part of the country. I have examined a male of this in the collection of the U. S. N. M. from Buck Key, Fla. (G. Brainard collector). It differs from *umbrosus* as follows: the lateral edge of the pronotum more sharply impressed, the posterior lobe and the anterior lobe of the pronotum except the central disk more closely and coarsely punctate, first and apical part of second segment of antenna (third and fourth broken off), rostrum and legs, ochraceous. Uhler commonly referred to *Aphanus umbrosus* as *Microtoma carbonaria* Rossi which is a synonym of *atrata* Goeze.

It is just as well to leave these in the genus *Aphanus* as placed by Horvath in the above named paper, but there is some question in my own mind but what Distant was correct in making these the bases for a new genus (*Dorochosa*) which, because of its preoccupation, was later changed to *Delochilocoris* by Dr. Bergroth.

Microtoma atrata Goeze.

I have omitted the above from my key to the Rhyparochromini and I include it in our fauna with some doubt as I have only seen one specimen of it in Uhler's collection (U. S. N. M.). But if Uhler's locality datum is correct this species should be accredited to the United States, for this single male specimen of this species is plainly labelled R. I., undoubtedly meaning Rhode Island. I have carefully compared this with European specimens in my own collection and there is no question of its identity. We cannot altogether trust Uhler's published records for this species as we know that he applied the above name or *M. carbonaria* Rossi to American specimens of *A. umbrosus* Dist., a much smaller species.

Valtissius new genus.

Shining. Pronotum and hemielytra sparsely pilose. Head triangular, scarcely transverse, width across eyes almost subequal to width of anterior margin of pronotum. Eyes touching pronotum. Antennæ shortly pilose, set close to eyes, first segment rather long, only a little shorter than third, apical third exceeding apex of tylus, third and fourth subequal. Rostrum reaching posterior coxæ, basal segment reaching base of head, subequal to basal segment of antennæ, second segment longer than third. Pronotum very short and transverse, without semblance of a collar in front, almost twice as wide as long and subequal to length of scutellum, scarcely separated into two lobes, disk of anterior lobe impunctate, posterior lobe sparsely punctate, anterior and posterior margins straight, two lateral margins straight, gradually converging anteriorly, the edge acute, beneath on the propleura with this edge longitudinally, linearly impressed. Scutellum a little longer than wide. Clavus with three regular rows of punctures. Commissure much shorter than the scutellum. Corium rather closely punctate. Moderately incrassate fore femur provided with a few very minute teeth and several long setæ. Hind tibia with a few fine setose bristles. Basal segment of posterior tarsus much longer than second and third together.

Type—*Petissius diversus* Distant, Biol. Cent. Amer. Heteropt., I, 407, Plt. 35, fig. 22, 1893.

This genus having quite different characters than those detailed by Distant for his *Petissius assimilandus*, it becomes necessary to erect a new genus to receive *P. diversus* which as the only representative so far known, becomes the type. Because of the position of the glandular opaque spots of the fourth ventral abdominal segment this genus should be placed in the Lethæini. Distant recorded this species from Panama and Guatemala, Van Duzee lists it for Florida and Texas. I have a specimen from Brazos Co., Texas, presented to me by Mr. Nathan Banks. In the U. S. N. M. is a specimen from Victoria, Texas, and another from Milwaukee Co., Mich., which carries its range far to the north.

Cryphula Stål (= **Trapezus** Dist.).

Distant apparently did not recognize this genus at the time he erected *Trapezus*, which is entirely synonymous with the above genus

of Stål. Not only that, but Distant's *T. trimaculatus* is undoubtedly our common *Cryphula parallelogramma* Stål. *Cryphula* (*Trapezus*) *apicatus* described by Distant from Mexico and Guatemala, occurs in the southwestern United States, with the following records: San Diego, Calif., Santa Rita Mts., Ariz., and Ft. Grant, Ariz. (U. S. Nat. Mus.); Huachuca Mts., Ariz., July 20, 1905—20 specimens taken by sifting dead leaves in the cañons (my coll.). This is very closely related to *C. parallelogramma* but besides the differently marked scutellum, the antennæ are shorter, more slender and generally paler. Like the type it occurs in both long and short winged forms.

***Cryphula abortiva* new species.**

General color pale castaneous, darker beneath; narrow costal margins, antennæ, rostrum, apices of the femora, tibiæ and tarsi more ochraceous. Antennæ, whole upper surface and venter, finely pilose. Head nearly as long as wide, impunctate. Basal segment of antenna exceeding apex of tylus by one-half its length, second segment longest of all, one-fourth longer than fourth, third a trifle shorter than fourth. Pronotum, parallel sided, the margins rather abruptly rounded in front and at this anterior rounded angle provided with the usual seta common to the other members of the genus, lateral edge very narrowly carinate, concolorous; posterior lobe concolorous, finely and obscurely punctate; anterior margin straight. Scutellum almost impunctate, concolorous with pronotum, not pale fasciate. Clavus flat, level with the corium from which it is rather poorly differentiated (brachypterous form), provided with four irregular series of fine punctures. Corium rather finely and closely punctate, apex reaching nearly to middle of fifth abdominal segment. Membrane very much abbreviated, reduced to a mere line along inner apical margin of corium. Commissure and inner margin of corium nearly of equal length, forming a straight line with each other, these together nearly equal to the length of the scutellum. Incrassate fore femur unprovided with developed teeth, merely with a few tubercles and long setæ. Hing tibia provided with two rows of four long, rigid, oblique bristles each. Posterior tarsus with basal segment nearly twice as long as second and third together. Length ♂ 3.5 mm.

Type—Brachypterous ♂ in my collection from Huachuca Mts., Ariz., July 20, 1905, where I took it with *C. apicatus* sifting among dead leaves. This species is quite distinct from the other known species. The upper surface being distinctly pilose and nearly concolorous, the scutellum non-fasciate and the membrane almost absent in the brachypterous form.

Togodolentus new genus.

Dorsal parts dull. Head not transverse, submerged to eyes, across eyes as wide as anterior margin of pronotum; preocular sides of head to base of antennæ nearly as long as eye. Bucculæ lightly elevated, meeting in an obtuse angle on a line drawn across middle of eyes. Rostrum with basal segment extended to base of head, second segment long, more than one-third longer than third, apex of fourth segment reaching just past middle coxæ. Antennæ very long, slender and nude; first segment long, longer than head, apex of tylus not reaching middle point of this segment, second segment not twice as long as basal, third segment about one-fourth shorter than second, apical segment one-third shorter than third. Pronotum not transverse, rather parallel sided, the lateral edges widely expanded and reflexed, a little widened between the lobes; anterior lobe subquadrate, disk obsoletely punctate; anterior margin lightly concave, submargin depressed and bounded behind by a series of punctures; posterior lobe coarsely punctate; posterior margin strongly concave. Scutellum longer than wide, punctate. Clavus not deflected to corium, widened posteriorly, rather closely and irregularly punctate. Commissure nearly as long as scutellum. Corium flattened, closely punctate; costal margin lamellary expanded, reflexed, pale. Membrane (in brachypterous forms) aborted, exposing fifth and sixth abdominal segments. Anterior femur much incrassate, armed with a few well developed teeth. Anterior tibia nearly straight. Posterior tibia not pilose but provided with a few fine very short bristles. Posterior tarsus with the basal segment twice as long as second and third segments together. Fourth ventral segment of the abdomen laterally provided with but two anteriorly placed opaque spots, therefore this genus should be placed in the tribe Lethæini, close to the genus *Eremocoris*.

Togodolentus genuinus new species.

Form narrow ovate. Head except apex, anterior lobe of the pronotum, scutellum, hemelytra except laterally, apex of the third and all of the fourth segment of the antennæ dull fusco-ferrugineous; apex of tylus, two basal segments and basal half of third segment of antennæ, rostrum, explanate lateral margins and posterior lobe of pronotum for the most part, costal margins of the corium, second and third pairs of legs and anterior tibia, ochraceous. Anterior femora, sub-apex of posterior femora and body beneath, castaneous; acetabulæ, posterior margin of pro- and metasternum slightly

paler than the venter. Head impunctate. Antennæ long, basal segment exceeding the apex of the head by more than half its length, relative lengths of other segments stated in generic characters. Pronotum longer than wide, with the anterior lobe subquadrate, disk finely punctate, more plainly punctate just within the laminate, reflexed, pale lateral margins; with a series of punctures just within the rather straight anterior margin; posterior lobe more depressed, closely and coarsely punctate; posterior margin lightly sinuate. Scutellum punctate with extreme apex pale. Clavus flat, level with the flattened corium and punctate in irregular series. Commissure long, almost as long as scutellum. Costal margin pale, expanded, and reflexed. Membrane fuscous, aborted, apical margin scarcely reaching beyond apical angle of the corium. Venter with long setæ posteriorly. Anterior femur with a large subapical tooth, between which and apex are several smaller teeth. Hind tibia with short bristles. Hind tarsus with basal segment twice as long as second and third together. Length ♂ 6.5 mm.

Type ♂ Los Angeles, Co., Cal.; Paratype ♀ same locality (U. S. N. M.).

This has much the appearance of a pale *Eremocoris* but its characters are quite distinct.

Scolopostethus pacificus new species.

Head, except apex of tylus, anterior lobe of pronotum, except lateral margins, humeral angles and two spots in the middle of the posterior lobe of pronotum, scutellum and sternum for the most part, dull, piceous-black; narrow anterior margin and posterior lobe of the pronotum for the most part, corium behind the middle, extreme apex of second, apical three-fourths of third and all of fourth segment of antenna, anterior and posterior margins of the prosternum, posterior margin of metasternum, acetabulæ and coxæ, ferrugineous-brown; apex of tylus, first segment, basal part of second and third segments of antenna, rostrum, anterior two-thirds of lateral margins of pronotum and propleura, anterior part of hemielytra and lateral spot behind middle, and legs, pale ochraceous. Membrane piceous-brown with a large white spot on either side. Venter shining, dark-castaneous brown.

Head slightly wider than long, finely punctate; eyes not quite touching pronotum, apex of tylus reaching to the middle of basal segment of antenna, second segment twice as long as first, third about one-third shorter than second, fourth segment about equal to third. Pronotum a little wider than long, transversely impressed through the middle, making the two lobes subequal; disk of anterior lobe impunctate, a series of punctures within the lateral edge which is only carinate in front, gradually more expanding posteriorly to become widest at the sinus between the two lobes, behind which it suddenly terminates before the elongate humeral elevation of the posterior lobe; anterior margin depressed, followed by a series of fine punctures; posterior lobe more closely and coarsely punctate. Scutellum with the central

disk depressed and finely punctate, posteriorly obsolete carinate. Clavus with three rows of punctures, the two outer anteriorly converging to form a single row. A little less than anterior half of corium, ochraceous with ferrugineous punctures along veins; more than posterior half of corium embrowned, sparsely punctate, with a large pale spot on either side opposite the apex of the commissure; the entire costal margin rather widely expanded, lightly reflexed and impunctate. Membrane piccous-brown, with some of the veins, particularly at base, pale, with a large white spot at the outer basal angle and another opposite to it at the inner apical angle. Fore femur armed with a single large post-median tooth, between which and apex is a row of four or five minute even teeth. Venter shining, provided with a coating of fine, white, incumbent hairs. Length ♂ 3.5 mm., ♀ 4.5 mm.

Described from 11 ♂'s and 3 ♀'s from Palm Springs, Cal. (coll. by Hubbard); 4 ♂'s and 4 ♀'s Los Angeles Co., Cal., collected by Coquillett in the collection of the U. S. N. M. Type a ♂ from Palm Springs, Cal. (U. S. N. M.). These are all macropterous individuals. This is the largest member of the genus thus far known to our fauna. It is most closely related to *S. atlanticus* Horv., having much the same general markings and armature of the fore femora. But besides being larger, the relative length of the antennal segments is different, the legs and antennæ paler, the pronotum relatively wider, etc.



NEW SPECIES OF TIPULINE CRANE-FLIES FROM EASTERN ASIA. (TIPULIDÆ, DIPTERA.)

BY CHARLES P. ALEXANDER,

LAWRENCE, KANSAS.

The following new species of crane-flies belonging to the subfamily Tipulinæ have been received from various sources. The Kamchatka material was collected by Dr. L. Stejneger, the Siberian specimen by Dr. Dall. The Japanese crane-flies were included in material sent to me through the kindness of Dr. Akio Nohira, these latter specimens being in my collection, the other material in the collection of the United States National Museum.

I have recently seen a copy of Matsumura's "Thousand Insects of Japan, addition two, 1916," and the following observations on synonymy should be made: